market info

Be Valued

Wonderlust

Apple's September 2023 Keynote

2023

Apple's long awaited iPhone 2023 event has been and gone and there were not a huge amount of surprises. We got some better watches, improved iPhones and the shift to USB-C for iPhone (and AirPods Pro) has finally happened, and along with it some tangible improvements for iPhone. This change may not have happened had the EU not intervened by requiring all smartphones and electronic devices to have USB-C ports by the end of 2024. Something that Apple tried to battle against stating "strict regulation mandating just one type of connector stifles innovation rather than encouraging it'. Whilst I agree with this sentiment to a point, Lightning has never really been used for anything outside of charging devices for many years whereas the move to USB-C opens up possibilities for fast data transfer, something Apple themselves state on the features page for the new iPhone 15 Pro saying it's "the first iPhone to feature USB 3 for a huge leap in data transfer speeds and faster pro workflows than ever before".

One thing that Apple are right about is the amount of e-waste that could be created by this move as there are an awful lot of Lightning cables and chargers out in the world. These are not immediately redundant as there are still a lot of old devices out in the world and even devices in Apple's current lineup that still utilise Lightning like the 9th gen iPad and previous iPhones. Perhaps with Apple's push for being carbon neutral by 2030 they will introduce a recycling scheme for old Lightning cables and adaptors.

With regard to their 2030 climate goal the new range of Apple Watches are the first completely carbon neutral products. According to Apple, each new carbon neutral Apple Watch will meet the following criteria: "100% clean energy for manufacturing and product use, 30% recycled or renewed material by weight, and 50% of shipping without the use of air transportation". In total, this equates to a 75% reduction in their overall emissions from 2015 levels.

Outside of the products that were announced these were the really big things I wanted to touch upon. Now on to the new launches!

ROUND TWO

Apple have updated their rugged watch offering with the Apple Watch Ultra 2. The update features both hardware and software updates which help elevate this as the most advanced smart watch on the market.

The first of the improvements is the new S9 SiP; a dual-core CPU with 60% more transistors than the previous model as well as a 4-core Neural Engine which processes machine learning tasks two times faster. The new chip also allows for features like on-device Siri, Precision Finding for iPhone and a brand new double tap gesture.

The double tap feature allows users to interact with their watch by simply double tapping their index finger and thumb together on their watch hand without touching the display at all; respond to messages, answer a call, stop/start a timer and much more. The Smart Stack can also be opened with a double tap from the watch face and further double taps will scroll through the available widgets. It's the new Neural Engine that enables this feature which processes data from the gyroscope, accelerometer and optical heart sensor with a new machine learning algorithm which detects tiny movements in the wrist and changes in blood flow when the index finger and thumb perform a double tap gesture. This feature will be enabled in October.

Apple have managed to increase the brightness of the Apple Watch Ultra 2 display to 3,000 nits. A 50% increase on the first Ultra. A twist of the crown will double the brightness of the display when using Flashlight.

Apple are introducing a new watch face to Ultra. The new face is called Modular Ultra. It features the most complications of any Apple Watch and takes advantage of the edge of the display by highlighting real-time data for altitude, depth or passing seconds.

For requests that do not require the internet, Siri is available on-device for starting things like workouts or a timer and for the first time users will be able to request fitness related information from Siri who has access to data from the Health app.

There will also be Carbon Neutral options that bundle in the new Alpine Loop or Trail Loop watch bands.

These are just some of the highlight features for the new Apple Watch Ultra 2 which launches on the 22nd September for £799.00/ AU$1,399.00.

The Apple Watch Series 9 was also announced and carries some of the new features we discussed with the Apple Watch Ultra 2.

Under the hood we have the Apple S9 SiP with support for the new Double Tap feature and on-device Siri. We also see the same doubling up of performance in the 4-core Neural Engine compared to the Series 8. The S9 SiP also features second-generation Ultra Wideband (UWB) to enable precision finding for the iPhone 15 which also features the chip.

The display will also reach 2,000 nits. Double that of the previous model so text is easy to read even in direct sunlight. Something else that I did not mention on the Ultra 2, but is feature on that watch and Series 9 is the watches ability to drop the brightness down to just one nit so it does not disturb others in the early morning or in dark rooms.

Series 9 will be available with the first carbon neutral 100% recycled aluminium variant when paired with the new Sport Loop straps. Series 9 will also be available in Stainless Steel.

Apple Watch Series 9 launches on the 22nd September starting at £399.00/AU$649.00.

There are also Apple Watch Nike variants with recycled straps as well as Apple Watch Hermès models that have completely removed leather from the equation. In fact, Apple have removed leather bands entirely from the range.

This year's iPhone 15 and 15 Plus update receives somewhat of a redesign from last year's model with the most obvious of those being the inclusion of the Dynamic Island first introduced on iPhone 14 Pro last year. This year's display available in 6.1-inch and 6.7-inch screen sizes reaches 2,000 nits, twice as bright as the previous model. In HDR, the iPhone 15 reaches a peak brightness of 1,600 nits.

The phone casing has also seen some changes. The aerospace-grade aluminium chassis now features a contoured edge, doing away with the sharp edges of previous models. Apple have also made a change to the back glass. Apple has embedded superfine metallic ions into the glass with a unique formulation for each. This glass is polished and etched to create a matte finish which should help the phone feel more grippy in the hand. Outside of a phone case, iPhones have felt slippery in the hand since they changed to glass backs, so hopefully this is an improvement.

The camera on iPhone 15 has been vastly improved from the 12MP of the iPhone 14. The 'Advanced dual-camera system' features a 48MP main camera with 2x optical zoom range for 12MP Telephoto pictures with an equivalent focal length of 52mm. Portraits can now be shot in Photo mode. Using machine learning the phone detects when a person is in the frame and captures depth information automatically. This picture can then be turned into a 'Portrait' photo right away or later in the Photos app. Also added is a feature called 'Focus and Depth Control' which allows users to switch focus between subjects after the photo has been taken. Apple also state they have made improvements to Night Mode which captures richer colours and sharper details than before.

Powering the new iPhone 15 and 15 Plus is last year's A16 Bionic chip which is still a powerhouse of a chip with its 6-core CPU, 5-core GPU and 16-core Neural Engine. iPhone 15 models both feature the second-generation Ultraband chip for connecting two iPhone devices at three times the range range as before, making Precision Finding and Find my Friends more effective than before.

Of course, the other major change to iPhone 15 is the move from Lightning to USB-C. Lightning has really been nothing more than a charging cable for many since iTunes was no longer required for transfer of music etc. The switch to USB-C makes the iPhone a far more flexible device than it ever has been before. This switch will allow iPhone to charge the updated AirPods Pro with USB-C charging case as well as Apple Watch. This also brings iPhone in line with a lot of Apple's product line like the majority of the iPad and Mac lineup.

The new iPhones will be available to pre-order on the 15th September starting at £799.00/AU$1,499.00 for iPhone 15 and £899.00/AU1,649.00 for the iPhone 15 Plus with general availability on the 22nd September.

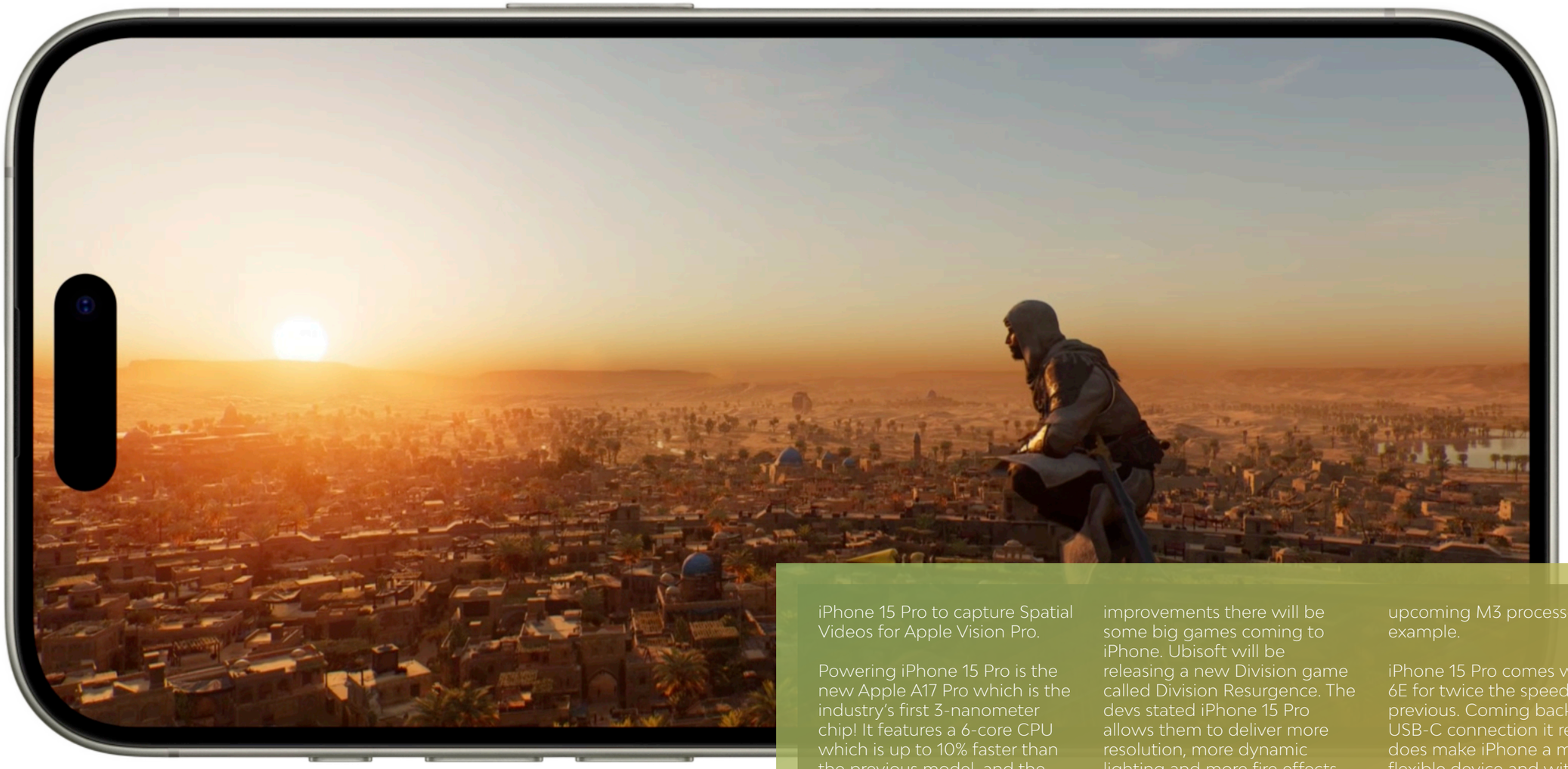
15

The new iPhone 15 Pro and iPhone 15 Pro Max have also been updated to include USB-C ports for charging but Pro does receive a USB 3 controller on the logic board. This upgrade to USB 3 for equates to data transfer speeds 20x faster than USB 2.

The most noticeable change to iPhone 15 Pro is the move to a titanium design. Titanium has a very high strength to weight ratio and is even the material used for constructing spacecraft. The move to titanium makes this Apple's lightest Pro lineup of smartphones ever. Apple have applied the same contoured edges to the titanium casing and it's paired with the strongest back glass on any iPhone. The titanium bands are bonded to a new aluminium frame that is constructed of 100% recycled aluminium. This frame has been designed to make the rear glass easier to replace and overall, repairs a lot easier. Yes, you read that correctly. The new iPhone 15 Pro's have been designed to be easier to repair. The new design also features thinner bezels than the previous, highlighting the Super Retina XDR displays which will again is available in 6.1-inch and 6.7-inch sizes with the Always-On and ProMotion features.

Another first is the removal of the function switch which has only ever toggled between ring and silent. In its place is a new Action button. This new button is customisable and users can choose between the following: Camera, Flashlight, access Voice Memos, Focus modes, Translate, accessibility features or even Shortcuts for even more options. A press-and-hold gesture launches the appropriate action with visual cues in the Dynamic Island as well as haptic feedback. It's a shame to see the old toggle switch go (I use it quite a lot), but silence/ring can be selected as the function if you want.

The cameras have of course received upgrades on the previous model. The new Photonic Engine combine the pixels from a high resolution picture with those of another shot thats been optimised for light, automatically creating 24MP pictures. Apple also state the new system is like carrying a camera with 7 lenses. The 0.5x Ultra-Wide doubles up as both a macro and 13mm equivalent. The 1x Main camera allows users to switch between 24, 28 and 35mm equivalent focal lengths. One of these can even be selected as the users default focal length. The 2x Telephoto lens is equivalent to a 48mm and a new 5x option is equivalent to 120mm. However, the new 5x option is only available in the Pro Max. To accommodate this Apple Pro Max features a Tetraprism design which reflects light rays four times before they hit the sensor. I'm guessing it is too large currently to fit in the smaller phone, hence its exclusion. This longer focal length has also been stabilised by a 3D sensor shift optical image stabiliser which makes twice as many adjustments as before. In addition to 48MP ProRAW pictures the Main camera also shoots 48MP HEIF pictures. Coming later to the phone will be the capability for



iPhone 15 Pro to capture Spatial Videos for Apple Vision Pro.

Powering iPhone 15 Pro is the new Apple A17 Pro which is the industry's first 3-nanometer chip! It features a 6-core CPU which is up to 10% faster than the previous model, and the 16-core Neural Engine is 2x faster than the previous. The 6-core GPU in A17 Pro is where the really big changes have occurred. For the first time iPhone features hardware accelerated ray tracing offering four times the performance over previous software based ray tracing. MetalFX Upscaling combines the performance of the GPU with the Neural Engine to provide high resolution graphics whilst consuming less power. This sounds similar to technologies like NVIDIA's DLSS, AMD's FSR, and Intel's XeSS.

As a result of these improvements there will be some big games coming to iPhone. Ubisoft will be releasing a new Division game called Division Resurgence. The devs stated iPhone 15 Pro allows them to deliver more resolution, more dynamic lighting and more fire effects. Capcom will be bringing both Resident Evil 4 Remake and Resident Evil Village to iPhone. Attendees at the event got to try Resident Evil Village and reported that it ran at a solid 30fps without any noticeable frame drops. Coming in early 2024, Ubisoft will be bringing their latest installment of Assassin's Creed, Mirage which is an homage to the original game. It is also reported that Death Stranding Directors Cut will be coming to iPhone sometime in 2023. This is quite exciting news for mobile gamers and also for Apple gaming in general. What could this mean for Apple's upcoming M3 processor for example.

iPhone 15 Pro comes with WiFi 6E for twice the speeds as the previous. Coming back to the USB-C connection it really does make iPhone a more flexible device and with these benefits it really makes you wonder why apple did not make the change sooner. Connection of SSD storage, 4K displays and microphones is now all possible and makes the ProRes video features on iPhone 15 Pro ake a whole lot more sense.

Finally, Apple are promising all-day batter life with up to 29hrs of video playback on 15 Pro Max and 23hrs on 15 Pro.

iPhone 15 Pr can be pre-ordered on the 15th September starting at £999.00/AU$ 1,849.00 and £1,199.00/ AU$2,199.00 for the Pro Max.